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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,917	01/10/2006	Neil Barton	021500-145	5444
21839	7590	05/27/2010		
BUCHANAN, INGERSOLL & ROONEY PC			EXAMINER	
POST OFFICE BOX 1404			ROBINSON, LAUREN E	
ALEXANDRIA, VA 22313-1404			ART UNIT	PAPER NUMBER
			1784	
NOTIFICATION DATE		DELIVERY MODE		
05/27/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/563,917	Applicant(s) BARTON ET AL.
	Examiner LAUREN ROBINSON	Art Unit 1784

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 February 2010.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 11,35-37,39-50,53-65 and 68-73 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 11,35-37,39-50, 53-65, 68-73 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 10 January 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) *Notice of Draftsperson's Patent Drawing Review (PTO-544)*
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Examiner's Comment

Upon further review, claims 37 and 64 as originally presented are subject to a 35 U.S.C. 112, second paragraph rejection making the present action Non-Final.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 37, 64 and 65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 64 is rejected for reciting that the glazing of claim 36 comprises one clear glass and one tinted glass. It is unclear as to how the glazing can comprise one clear and one tinted glass when claim 36 requires both glasses to be clear. As the examiner has no clear indication of what the scope of claim 64 is, a prior art rejection can not currently be applied and the claim is rejected for being unclear.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a

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question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, claim 37 recites the broad recitation the other glass ply of claim 11 tinted with a composition comprising 0.5 to 4% total iron. However, claim 11 includes that "at least one ply of glass" is tinted with a composition comprising 0.8 to 4.0% total iron. As claim 11 allows for both plies to comprising 0.8 to 4% total iron, claim 37 reciting a ply comprising 0.5 to 4% iron is more broad rendering the claim indefinite.

Claim 65 recites the other ply of claim 35 being tinted with a composition comprising 0.4 to 4% total iron. However, claim 35 includes that "at least one ply of glass" is tinted with a composition comprising 0.8 to 4.0% total iron. As claim 35 allows for both plies to comprising 0.8 to 4% total iron, claim 37 reciting a ply comprising 0.4 to 4% iron is more broad rendering the claim indefinite.

Claim Rejections - 35 USC § 103

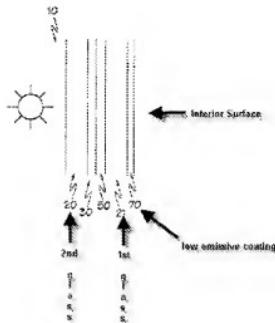
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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1. Claim 36, 54, 56, 58, 60, 62 and 70-73 are rejected under 35 U.S.C. 103(a) as being obvious over Byker et al. (US PN. 6,446,402).

Regarding claims 36, 58, 60, and 70-71: Byker et al. teach a laminated glazing (abstract, Figures) for use in vehicles and the glazing is provided below.



The glazing includes first (21) and second (22) plies (Col. 24, lines 24-35), including glass (Col. 14, lines 10-20, Col. 15, lines 30-45) having an interior surface. The plies have oppositely facing first and second surfaces and both plies can be clear glass (Col. 14, lines 51-58). A plastic layer 50 between the plies, corresponding to an interlayer as claimed, can be body-tinted (Col. 24, lines 24-35, Col. 11, lines 10-44, Col. 12, lines 50-67, Col. 13, lines 1-67, Col. 14, lines 54-60, Col. 15, lines 30-45, and Col. 18, lines 43-65). The body tinted plastic layer contacts a first surface of the first glass 21 and as applicants' only claim "contact" and not "direct contact" the plastic layer contacts a first surface of the second glass 20, via the barrier layer.

In the instance, applicants' argue direct contact, Byker teaches the layer 30, which is a barrier layer, to be optional (Col. 2, lines 65-67-Col. 3, lines 1-20) and this

allows for direct contact of the plastic layer on the first surface of the second glass. A low emissivity film 70 is on the interior surface of the glazing (Figure 1c, Col. 24, lines 24-35) by overlying and in contact with the second surface of the first glass 21. The second surface of the second glass 20 is exposed to sunlight.

Byker teaches the plastic interlayer having a thickness of 0.001 to 0.1cm (0.01mm to 1mm) can absorb a few to 50% or more of visible and/or infrared (energy) transmission (Col. 18, lines 58-67- Col. 19, lines 1-5). This provides the interlayer transmitting a majority to 50% or less visible light transmission and/or a majority to 50% or less energy transmission. The teaching allows for transmission values at thicknesses overlapping applicants' providing a *prima facie* case of obviousness (MPEP 2144.05). Also, as the glazing transmission will be affected by the level of transmission through the interlayer, one having ordinary skill would know that Byker's glazing transmission will have to be the same as or less than that of the interlayer since the transmission must first go through said interlayer. Therefore, Byker's glazing transmission is taken to fall within this range and also overlap applicants providing a *prima facie* case of obviousness.

As Byker teaches an overlapping range of transmissions and from what is known in the art, it appears that applicants' are claiming optimum and workable ranges through routine experimentation. For example, it is well known in the art that transmission is a result effective variable which changes with varying composition, etc.. Specifically, one having ordinary skill would know that Byker's transmissions can be adjusted to any value within their overlapping ranges by optimizing such composition, etc. of their

interlayer, etc. and through routine experimentation, desired results can be obtained. As it has been held by the courts that differences in range values do not support patentability unless there is evidence indicating criticality, based on the reasoning above, it would have been obvious to one having ordinary skill to choose any transmission values within Byker's ranges in order to obtain desired optical properties.

Regarding claims 54, 56 and 62: The plastic interlayer includes IR absorbing materials (Col. 18, lines 43-67 and Col. 19, lines 1-5) and the glazing can be used for a vehicle windscreen (Col. 16, lines 45-46). Also it was discussed that no barrier is necessary (0mm), each glass ply has a thickness of from 20 micron to 8 cm (0.02mm to 80mm) (Col. 15, lines 45-50), and the plastic interlayer has a thickness of 0.001 to 0.1cm (0.01mm to 1mm) (Col. 14, lines 1-10).

Byker does not disclose the low e coating thickness to provide for the total thickness but it is known in the art that not only are low e coatings thin but thickness in general is result effective. Specifically, by adjusting thickness of individual layers as well as the overall glazing, the optical and/or physical properties will change including level of transmission, strength, etc. Through routine experimentation of optimizing thicknesses, desired results can be obtained. As applicants' have not shown criticality to their range, it appears applicants' are merely claiming optimum and workable ranges which does not provide patentability to the invention. Therefore, It would have been obvious to one of ordinary skill in the art at the time of invention to modify Byker et. al. to include the thickness of the layers can be optimized to any value, thereby providing any total value, in order to obtain desired optical and/or physical results.

Regarding claims 72 and 73: It was discussed that Byker teaches overlapping visible and energy transmissions for the glazing and it would have been obvious to optimize each to any value. As applicants' claimed values depend from the above transmissions, it is expected that through the routine experimentation of optimizing transmissions, the claimed values would be obtained.

2. Claims 11, 35, 37, 39-48, 50, 53, 55, 57, 59, 61, 63, 65, 68 and 69 are rejected under 35 U.S.C. 103(a) as being obvious over Byker et al. (US PN 6,446,402) in view of Higby et al. (US Pub. 2002/0025899).

Regarding claims 11, 35, 37, 65, 68 and 69: As discussed, Byker et al. teach a laminated glazing (abstract, Figures) for vehicles having an interior surface. Specifically, the glazing comprising first and second glass plies having oppositely facing first and second surfaces, a body-tinted plastic interlayer laminated between and contacting the first surfaces of both plies, a low e coating on the glazing interior, overlying the first ply second surface and the second ply second surface being exposed. The laminated glazing is provided below.

Byker teaches that the plies can be body-tinted (Col. 15, lines 54-60 and Col. 18, lines 43-65) and the body-tinted interlayer can be polyvinyl (Col. 11, lines 10-44, Col. 12, lines 50-67-Col. 13, lines 1-67, Col. 15, lines 35-45). The examiner notes that while Byker does not disclose the interlayer being transparent, it is known in the art that every material absent a teaching of opaqueness will have some degree of transparency and specifically, Byker even teaches transmission through the interlayer which indicates transparency. In the instance applicants' attempt to argue transmission value, according

to applicants' published paragraph 0037, a polyvinyl interlayer meets their claimed "transparent plastic". Byker fails to teach the body-tinted glass composition and transmission at a thickness as claimed.

Higby et al. teach glass plies used for vehicle glazings (0002). Higby teaches that it is beneficial to obtain glass plies which are UV absorbing having neutral tint as this provides improvement and solves transmission problems commonly obtained in known glass when attempting low solar and high visible transmission desired in the art (abstract, 0005-0007). The tinted glass ply compositions comprising 0.3 to about 0.7% total iron calculated as Fe₂O₃ (0018), wherein 21% of said total is ferrous (FeO) (0010, 0018) (ie: around 0.15% by weight of glass being of FeO).

Byker et al. and Higby et al. disclose analogous inventions related to tinted glass plies used in vehicle glazings. As Higby discloses their tinted plies to be an improvement over known plies of vehicle glazings, it would have been obvious to one having ordinary skill in the art at the time of invention to modify Byker to include Higby's tinted glass compositions for their tinted plies to obtain an improved glass having low solar and high visible transmissions without known transmission problems.

The examiner notes that Higby teaching the composition comprising "about 0.7%" Fe₂O₃ allows for values slightly above 0.7%, such as 0.8%, and therefore, overlap applicants' providing a prima facie case of obviousness. Further, in the instance it is determined that the values do not overlap, they are so close that one having ordinary skill would expect the same results to be obtained. Therefore, it would have

been obvious to one having ordinary skill in the art to include 0.8 Fe₂O₃ in Byker's composition to obtain similar tinting properties.

While Byker does not teach the transmission as claimed, Byker's modified glass includes applicants' claimed tinted body composition and one having ordinary skill would reasonably expect them to have the same results. Therefore, applicants' claimed transmission at a thickness for the plies is expected to flow from Byker absent an evidentiary showing to the contrary.

Regarding claims 41, 47, 53 and 61: The interlayer includes IR absorbing materials and Byker teaches that the glazing can be used as a windshield (windscreen) (Col. 16, lines 45-46).

Regarding claims 42-43 and 55: As discussed, Byker teaches the glass plies having a thickness of 20 micron to 8 cm (0.02mm to 80mm) (Col. 15, lines 45-50), the plastic interlayer having a thickness of 0.001 to 0.1cm (0.01mm to 1mm) (Col. 14, lines 1-10) and although Byker fails to teach the low e coating thickness and thereby the total glazing thickness, one having ordinary skill would know that individual layer thickness and total thickness is result effective. Specifically, adjusting each layer and total thickness, the optical and/or physical properties including transmission, strength, etc. of the glazing will change and through routine experimentation of optimizing thicknesses, desired results can be obtained. It would have been obvious to one of ordinary skill in the art at the time of invention to modify Byker et. al. to include that the thickness of each layer (interlayer, low e, substrate, etc.) and total glazing thickness can be optimized to any value, to obtain any desired optical and/or physical results

Regarding claims 39-40, 44-45, 46, 57 and 59: As also discussed, Byker discloses the interlayer absorbing from a few percent to 50% or more of visible and/or infrared (energy) transmission (Col. 18, lines 58-67- Col. 19, lines 1-5) at 0.01mm to 1mm thickness which provides transmission values at thickness that overlap applicants' providing a *prima facie* case of obviousness. The teaching allows for transmission values at thicknesses overlapping applicants' providing a *prima facie* case of obviousness (MPEP 2144.05). Also, as the glazing transmission will be affected by the level of interlayer transmission, one having ordinary skill would know that Byker's glazing transmission will have to be the same as or less than that of the interlayer since the transmission must first go through said interlayer. Therefore, Byker's glazing transmission is taken to fall within Byker's range and also overlap applicants providing a *prima facie* case of obviousness.

In addition to Byker teaching overlapping transmissions, from what is known in the art, it appears that applicants' are claiming optimum and workable ranges through routine experimentation as is well known in the art that transmission is a result effective variable which changes with varying composition, etc.. One having ordinary skill would know that Byker's transmissions can be adjusted to any value within their overlapping ranges by optimizing such composition, etc. of their interlayer, etc. and through routine experimentation, desired results can be obtained. As it has been held by the courts that differences in range values do not support patentability unless there is evidence indicating criticality, it would have been obvious to one having ordinary skill to choose

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any transmission values within Byker's ranges in order to obtain desired optical properties.

Regarding claims 48 and 63: Byker teaches the glazing being used for vehicle roofs (Col. 16, lines 45-46) and while Byker teaches that the two glass plies being tinted and/or clear, Byker fails to teach the outer ply being tinted while the inner ply is clear.

Although Byker does not teach a specific example using a tinted and clear ply together as claimed, Byker disclosing that the plies can be chosen to be tinted and/or clear suggest that combinations of one ply being clear and the other being tinted including the specific combination as claimed being possible.

Additionally, the specific claimed combination of the outer ply being tinted and the inner ply being clear as claimed would be within the skill in the art reading Byker. For example, Byker desires to reduce UV transmission into the glazing interior and this is done by using the tinted glass to absorb UV. One having ordinary skill would know that the outer ply is exposed to UV at the source (sun) and by using a tinted glass an outer ply, one of ordinary skill would reduce UV to a better extent from even entering the glazing let alone the interior. Also, since the interior is a vehicle interior, it is known in the art that driver visibility is a great concern. If both plies are tinted the glazing would be dark and limit visibility. By obtaining the outer ply being tinted and the inner ply being clear, one having ordinary skill would know that UV absorbance can be maintained while not greatly limiting visibility. It would have been obvious to one of ordinary skill in the art at the time of invention to modify Byker et al. to include the outer ply being tinted

and the inner ply being clear in order to absorb UV while still allowing for driver visibility in a vehicle.

Regarding claim 50: As maintained above, the overall glazing can be made to have a visible and energy transmission of a few percent to 50% or more which overlaps applicants' providing a *prima facie* case of obviousness. While it is not disclosed that the glazing has a visible transmission of at least 15% with a total solar energy transmission not greater than 15% more than the visible, it was discussed that transmission is result effective that changes with concentration, etc. and through routine experimentation of optimizing concentration, etc., desired results can be obtained.

Also, applicants' specific transmission combination would be within the skill of the art as is was mentioned that Byker desires less UV transmission and one having ordinary skill would desire higher visible transmission for the driver. For example, the most desirable scenario, although not necessarily present, would be 100% visible transmission with 0% UV which is meets the relationship claimed. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Byker et al. to optimize the composition, etc. to obtain any relationship of the UV and visible transmission in order to obtain desired optical results.

3. Claim 49 is rejected under 35 U.S.C. 103(a) as being obvious over Byker et al. (US PN. 6,446,402) and Higby et al. (US Pub. 2002/0025899) as applied to claim 48, in view of Baudin et al. (US PN. 4,910,088).

Byker et al. teach the glazing laminates of claim 48 but fails to teach the low E coating being pyrolytic.

Baudin et al. teach laminate glazings for vehicle windows (title) comprised of two glass sheets with a low e coating on the external side of one of the sheets (abstract). Baudin teaches the low E coating should be pyrolytic for obtaining low diffused light transmission (Col. 4, lines 59-64).

Byker et al. and Baudin et al. disclose analogous inventions related to vehicle window glazings comprising low e coatings. As Baudin et al. teaches that low E coatings in general, not limited to their tin oxide, should be pyrolytic for low light diffusion, one having ordinary skill would recognize and find obvious to make Byker's coating pyrolytic to obtain similar results. It would have been obvious to one having ordinary skill at the time of invention to modify Byker to include the low e coating being pyrolytic to obtain low light diffusion in the glazing.

Response to Arguments

Applicant's arguments filed February 19, 2010 regarding the 35 U.S.C. 112 first paragraph rejection for lack of support for 0.8% Fe₂O₃ is persuasive and the rejection has been withdrawn,

Applicant's arguments filed February 19, 2010 regarding the rejection of Byker and Higby been fully considered but they are not persuasive.

Applicants argue against the Office's assertion that Higby teaches from 0.3 to "about" 0.7% total iron. Specifically, the portion of Higby relied upon by the Office is disclosing a batch and not glass and one having ordinary skill in the art would know that these are not the same as batch refers to a mixture to form glass. Applicants argue that

Higby actually teaches a glass having 0.3 to 0.7% total iron with the word "about" not included.

This is not persuasive because although the examiner agrees that a batch is a mixture to form glass, it is well known and reasonably expected in the art that absent a teaching of diffusion, evaporation, etc. the composition of metal oxides in a batch will form the composition of the glass. Also, applicants' have provided no evidence to show that "about" 0.7 will not be included in the final glass formed by the batch. Therefore, the section relied upon by the office indicating a glass batch comprising 0.3 to "about" 0.7 is considered to form a glass comprising 0.3 to "about" 0.7. Although applicants argue that another section of Higby discloses only 0.3 to 0.7% total iron without the word "about", this does not exclude the fact that the section relied upon by the examiner includes "about" 0.7%.

Applicants argue that Higby's total iron range is small and one having ordinary skill would not increase it by 25% even with the word "about". Also, applicants argue that one having ordinary skill would not obtain more than 0.7% total iron because this would reduce the light transmission below Higby's threshold of 70%.

This is not persuasive because applicants arguing that one having ordinary skill would not increase iron about by 25% with the word "about" is merely attorney argument which can not take the place of evidence. Also, applicants arguing that one having ordinary skill would not obtain more than 0.7% total iron because this would reduce the light transmission below Higby's threshold of 70% is not persuasive. Specifically, Higby does teach that if the total iron content is above their critical

maximum, the transmission will fall below their threshold but the examiner points out that the total iron content referred to in this paragraph is "about" 0.7 which includes values slightly higher including 0.8%. Therefore, there is no clear indication that an amount of 0.8% would cause transmission to be below 70% and as applicants have not provided any evidence to the contrary, this is considered attorney argument and is not persuasive.

Applicants argue that although the Office asserts that Byker teaches overlapping ranges for visible and energy transmittance, there is nothing in Byker to disclose a visible transmission as low as 35% or less. Specifically, applicants' point to a portion in Byker teaching 50 to 90% visible transmission and argue that one having ordinary skill would not obtain such a transmission.

This is not persuasive because while Byker might teach an example having 50 to 90% visible transmission, this does not exclude the fact that Byker teaches a visible transmission range overlapping applicants' and allowing for transmission values below the exemplified 50% such as 35% as claimed. Additionally, as transmission is a known result effective variable which changes with optimized composition, etc, one having ordinary skill would find it obvious to choose any transmission within Byker's overlapping range by optimizing composition, etc. to obtain desired results for the glazing.

Applicants argue unexpected results for their interlayer having the claimed transmission value as they argue that tinted glass is not required. Instead, the glazing relies solely on the interlayer to restrict transmission which allows for a wide range of

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products. Applicants' conclude that Byker does not teach the claimed range or the benefits.

This argument is not persuasive because while applicants argue that their interlayer having the claimed transmission allows for tinted glass to be excluded, Byker teaches their interlayer having the overlapping transmission values can be used with clear instead of tinted glass. Therefore, the result which applicants argue is an unexpected benefit is clearly taught Byker and would be expected by one having ordinary skill.

Applicants argue that the references do not teach the subject matter of their new claims but this is not persuasive as now rejected by said references in the above office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAUREN ROBINSON whose telephone number is (571)270-3474. The examiner can normally be reached on Monday to Thursday 6am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LAUREN ROBINSON/
Examiner, Art Unit 1794

/Jennifer C. McNeil/
Supervisory Patent Examiner, Art Unit 1784